

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF HAWAI‘I

NATIONAL ASSOCIATION FOR
GUN RIGHTS; RONDELLE AYAU;
JEFFREY BRYANT,

Plaintiffs,

v.

ANNE E. LOPEZ, in her official
capacity as Attorney General for the
State of Hawai‘i,

Defendant.

Civil No. 1:22-cv-404-DKW-RT

**DECLARATION OF DENNIS
BARON**

DECLARATION OF DENNIS BARON

I, Dennis Baron, declare under penalty of perjury that the following is true and correct:

1. I have been retained by the Department of the Attorney General, State of Hawai‘i, to provide expert opinion and testimony regarding Corpus Linguistics research. I am being compensated at a rate of \$350 per hour. The opinions expressed in this declaration are based on my knowledge, skill, experience, training, and education, and I hold these opinions to a reasonable degree of professional certainty. I have attached a true and correct copy of my curriculum vitae to this declaration.

EXHIBIT "1"

2. I have evaluated the historical use of the terms *arms* and *accoutrements* in order to determine whether large-capacity magazines (henceforth, LCMs), along with magazines, ammunition cases, cartridge cases or boxes, and other ammunition storage containers were considered arms in the time during and just after the Founding Era (1750–1820) through the Reconstruction Era, i.e., the period following the ratification of the Fourteenth Amendment (1868–1890).

3. I have also evaluated the lexical evidence for “repeater air guns,” which are sometimes referred to as “wind guns,” and the rare terms “magazine wind-gun” and a “magazine gun” in the Founding Era. “Air guns” used compressed air instead of gunpowder to propel a ball. Repeater air guns were capable of firing multiple shots before requiring the user to reload the weapon.

4. The lexical evidence leads me to conclude that (1) LCMs, magazines, ammunition cases, cartridge cases, boxes and other ammunition storage containers were considered accoutrements and not arms during the Founding and Ratification Eras, and (2) although a few artisans did invent air guns capable of firing multiple balls without reloading the ammunition or recharging the air cylinder, such guns were rare in England and America.

BACKGROUND AND QUALIFICATIONS

5. I am currently Professor Emeritus and Research Professor at the University of Illinois, where I have served as a member of both the Department of

English and the Department of Linguistics since 1975. I served as Head of the Department of English for six years and before that as Director of Rhetoric at the University for 11 years. I earned my Ph.D. in English language and literature from the University of Michigan in 1971, with a dissertation on historical aspects of the English language from Old English to Present-Day English, and I continue to publish widely on matters of historical language use, in addition to topics related to language and law. I am a life member of the Linguistic Society of America, the American Dialect Society, and the Modern Language Association, as well as a member of the National Council of Teachers of English. I have held a Fulbright Fellowship (to France), a National Endowment for the Humanities Fellowship for work on a book on language and law, and, most recently, a Guggenheim Fellowship for work on my latest book on language and law. I have also published books on language reform, on usage, and on gender in language.

6. Most relevant for this report, I published two books on language and law: *The English-Only Question: An Official Language for Americans?* (Yale Univ. Press, 1990) and *You Can't Always Say What You Want: The Paradox of Free Speech* (Cambridge Univ. Press, 2023). In addition, I served as lead author on what came to be called "the Linguists' Brief" in *District of Columbia v. Heller*, 554 U.S. 570 (2008), a brief cited both by Justice Scalia in the majority opinion, and by Justice Stevens in his dissent. I was a co-author on another brief by professors of linguistics

and corpus linguistics, cited in *New York State Rifle and Pistol Ass’n. v. Bruen* (No. 20-843, 2022), which Justice Breyer cited in his dissent. In that dissent, Justice Breyer also quoted directly from my essay “Corpus Evidence Illuminates the Meaning of ‘Bear Arms’” (*Hastings Constitutional Law Quarterly*, 46.3: 2019). I have spoken about historical meaning and the Second Amendment at the Federalist Society at the University of Chicago Law School, at the Neubauer Symposium on Historical Semantics at the University of Chicago, at Brigham Young University Law School, at Stanford University, and at the conference “*Heller* after Ten Years” at Hastings College of Law. I have also written opinion essays on historical meaning and the Second Amendment for the *Washington Post* and the *Los Angeles Times*. And I have submitted the following declarations: a declaration on behalf of the State of Rhode Island in *Ocean State Tactical, LLC, et al. v. State of Rhode Island* (No. 1:22-cv-00246-JJM-PAS); a declaration on behalf of the State of Delaware in *Delaware State Sportsmen’s Association, Inc., et al. v. Delaware Department of Safety and Homeland Security; Nathaniel McQueen, Jr.* (No. 1:22-cv-00951-RGA, Consolidated); a declaration on behalf of the State of Massachusetts in *National Association for Gun Rights and Capen v. Baker* (No. 22-cv-11431-FDS); a declaration on behalf of the District of Columbia in *Hanson, et al v. District of Columbia, et al.* (No. 1:22-cv-02256-RC); a declaration on behalf of the State of Connecticut in *National Association for Gun Rights v. Lamont* (No. 3:22-cv-01118-

JBA); and declarations on behalf of the State of California in *Rupp, et al. v. Bonta* (No. 8:17-cv-00746-JLS-JDE), *Duncan, et al. v. Bonta* (No. 3:17-cv-01017-BEN-JLB), and *Fouts, et al. v. Bonta* (No. 3:19-cv-01662-BEN-JLB). In the past twenty years I have been an expert consultant in fourteen cases involving document interpretation. A copy of my curriculum vitae is attached to this declaration as **Exhibit A**.

7. My recent essay, “Look It Up in Your *Funk and Wagnalls*: How Courts Define the Words of the Law,” an analysis of how judges incorporate information from dictionaries and digitized corpora as they ascertain legal meaning, appears in the latest issue of *Dictionaries*, the academic journal of the Dictionary Society of North America.

8. I have been retained by the Department of the Attorney General, State of Hawai‘i to provide expert testimony in litigation challenging Hawaii’s assault pistol and large capacity magazine regulations. I am being compensated at a rate of \$350 per hour for my work on this report and for any additional work required including providing testimony at trial. This report is made based on my professional knowledge and expertise, and on my research using accepted scientific linguistic methodology in the field of Corpus Linguistics, the analysis of one or more large, digitized corpora consisting of many millions of words.

OPINIONS

Summary of Conclusions

9. Historical evidence from a number of large textual databases, or corpora, shows that during the Founding Era and the Reconstruction Era, “arms” is used as a general term for weapons (typically swords, knives, rifles, and pistols), but arms does not include ammunition, ammunition containers, flints, scabbards, holsters, armor, or shields, which are included in the category “accoutrements.” Nor does arms refer to parts of weapons, for example the trigger of a gun, the hilt of a sword, or the cartridge box or magazine that holds the bullets.

10. Instead, when this additional equipment is mentioned, we find phrases like “arms and ammunition”; “arms and accoutrements”; or “arms, ammunition, and accoutrements.” For example, “arms and accoutrements” is frequently used in military contexts to distinguish weaponry and related equipment from the rest of a soldier’s or militia member’s equipment. For example, militia requirements often specify that soldiers have certain arms (pistols, swords, rifles, according to their rank) as well as certain “accoutrements” (the word is typically plural) (including horses, saddles, cartridge cases or boxes, scabbards, flints, and so on). When the term “accoutrements” occurs alone, as in “the accoutrements of a soldier,” it may include both arms and accessories. “Cartridge boxes” and “cartouch boxes” are the terms used for ammunition containers in the eighteenth and nineteenth centuries and

are analogous to today's "magazines." When "arms and accoutrements" occurs as a phrase, there is a clear distinction made between weapons themselves and the soldier's cartridge boxes or cartouch boxes, which are typically identified as accessories along with scabbards, saddles, holsters, belts, caps, pouches, and the rest of a soldier's equipment.

11. I have found no lexical evidence that repeater air guns were used as military weapons in England or America in the Founding Era, or that they were used as weapons of personal self-defense at that time.

Theory and Methodology

12. Corpus linguistics as a field developed in the late 1960s, when scholars began using computer programs to analyze large bodies of digitized text. Initial work in corpus linguistics did not typically involve legal issues. Literary scholars developed computerized concordances to the works of Shakespeare, Milton, and other major English writers. Scholars plotted the frequency of words and phrases in order to develop a picture of an author's style, and to determine authorship of a particular work when the provenance was in doubt. Soon, in addition to solving literary mysteries, the methodologies used by corpus linguists were successfully applied in a number of criminal cases in the United States and in England involving, for example, the authorship of a ransom note or an email. Lexicographers, who began compiling large analog databases of text in the late nineteenth century, began

to digitize their libraries of paper data and to add to that material, assembling computerized databases of historical and contemporary text and, more recently, of spoken language as well, in order to arrive at more precise definitions of the multiple senses of words and phrases.

13. The Oxford English Dictionary (OED) is the standard dictionary of the English language compiled on historical principles. As a graduate student at the University of Michigan in 1970, I coded analog texts from the relevant OED files to help build the computerized database for the Dictionary of Early Modern English, the period from 1500–1800 that is particularly relevant to the language of the Founding Era. Today, major dictionaries like the OED and the Merriam-Webster suite of dictionaries rely on public databases of oral and written language, as well as their own proprietary databases, in order to revise older definitions and to track the spread of new words and meanings. The major dictionary makers of Europe use similar databases in their own work.

14. Over the past twenty years, legal corpus linguistics (LCL) has developed as a subset of corpus linguistics. LCL involves the analysis of digitized corpora of current and historical English to establish meaning—often referred to as “original public meaning”—in statutes and the Constitution. Over the past decade, LCL has become an important tool in helping to determine original public meaning when such meaning is in doubt. In *Muscarello v. United States*, 524 U.S. 125 (1998),

a case which held that “a person who knowingly possesses and conveys firearms in a vehicle, including in its glove compartment or truck, can be deemed to be within the scope of the statutory phrase ‘carries a firearm,’” Justice Breyer searched two computerized newspaper databases (Lexis/Nexis, for the *New York Times*, and Westlaw, for “US News”) to clarify the meaning of the words “carry, vehicle,” and “weapon.” In 2012, Judge Richard Posner, of the Seventh Circuit, was perhaps the first jurist to use a general internet search in order to determine a word’s meaning in a statute. Not satisfied with the dictionary definition that the government relied on in the case before him, Judge Posner ran a Google search to confirm that the word “harbor” in the Immigration Act of 1917 does not mean “shelter,” as the government claimed, but rather “hide, conceal from view,” as he felt it must mean in the context of the statute. *United States v. Costello*, 666 F.3d 1040 (7th Cir. 2012).

15. More principled, scientific database searches soon followed, and in 2018 Judge Thomas Lee, of the Utah Supreme Court, a long-time champion of corpus linguistics, together with the legal scholar Stephen Mouritsen, summarized the latest research in corpus linguistics and LCL as a way to determine ordinary meaning, and more specifically, original public meaning with more clarity (Thomas Lee and Stephen Mouritsen, “Judging Ordinary Meaning,” *Yale Law Journal* 127(2018): 788–879). Jurists over the past few years have found that in several cases, LCL proves more useful than the period dictionaries (for example, the dictionaries

of Samuel Johnson and Noah Webster) that courts have often relied on to determine historical meaning. LCL often supplements the historical interpretations found in older dictionaries and in the Oxford English Dictionary, as well, allowing a more precise interpretation of historical text data.

16. In addition to the publication of several significant law review articles by experts in the field of corpus linguistics, there have been several conferences on legal corpus linguistics in the past few years, and a number of continuing-education seminars on LCL are now offered for judges and lawyers. As a result, corpus linguistics has drawn increased attention from the courts, including recent mentions in decisions in the Sixth, Seventh, and Ninth Circuits, as well as a comment by Justice Alito in his concurrence in *Facebook, Inc. v. Duguid*, 141 S. Ct. 1163 (2021), where he suggested that LCL may one day provide a useful alternative to the canons of interpretation.

17. Several large databases have come online in the past few years that facilitate LCL research. Brigham Young University's Center for Law and Corpus Linguistics hosts the Corpus of Founding Era American English (COFEA), with more than 126,000 texts, comprising close to 137 million words and covering the years 1760–1799. BYU's Corpus of Early Modern English (COEME), with data from 1475–1800, contains over 40,000 texts and 1.1 billion words. For the nineteenth century, the Corpus of Historical American English (COHA), initially

developed at BYU but now independent of that institution, currently contains 475 million words of text from 1820–2020. The size of these databases continues to grow as more works are digitized, coded, and added to the corpora. In compiling this report, I reviewed each of these databases. Some of the corpora provided data for some lexical searches, but not for others. The examples cited in this declaration specify which corpus they are drawn from.

18. Critics of LCL have complained that databases like COFEA and COEME contain only texts written by “elites,” whose language may differ from that of “ordinary people” who do not write at all, or who for various reasons do not write texts likely to be included in the available corpora. It is certainly the case that many printed books and periodicals, along with documents like the Constitution, its amendments, and state and federal statutes, tend to be written by educated specialists and professional writers. Although “ordinary people” are expected to understand the language of the Constitution, the Declaration of Independence, and other founding documents, as well as the laws that govern the nation, such texts typically require specialized knowledge. A reading-difficulty formula like the commonly used Flesch-Kincaid scale suggests that the Declaration of Independence and the Constitution require a fifteenth-grade reading level, while according to one comprehensive study, *Adult Literacy in America* (National Center for Education Statistics, U. S. Department of Education, 1993;

<https://nces.ed.gov/pubs93/93275.pdf>), the average American adult tends to have a seventh- or eighth-grade reading level (the National Center for Education Statistics no longer uses “grade level,” instead rating literacy levels for Americans between ages 16 and 65 on a scale from 1 to 5; measurements conducted in 2003 showed no significant change from the 1993 NCES report; and the most recent data, from 2014, confirm that most adult Americans still test at or below level 2, with 4.1% testing *below* level 1; <https://nces.ed.gov/pubs2019/2019179/index.asp>).

19. In order to counter any “elite” bias that may be found in databases like COFEA, COEME, and COHA, I rely as well on five digitized newspaper databases covering the period 1750–1900, focusing for this report on the Founding Era and on the period of Reconstruction after the passage of the Fourteenth Amendment. Newspapers of the eighteenth and nineteenth centuries were the principal means of communicating news and information. As such, they embodied much of the language of the “ordinary people” who read them. These early newspapers also provide researchers with more data for the nineteenth century than a corpus like COHA, which covers the same period but tends to focus on literary and specialized texts rather than material for the general reader. Because of changes in print technology and the spread of literacy, Founding Era newspapers differed from the newspapers of the post-Civil War era. Print technology remained relatively static between the 1450s, when printing presses first appeared in Europe, and the early

nineteenth century, when the Industrial Revolution drastically changed printing methods. The first printing press was adapted by Gutenberg from the design of the traditional wine press, and for centuries, printing was a slow and labor-intensive process. As a result, newspapers in the founding era were small, averaging four to eight pages. Publication was less frequent as well. Papers tended to appear weekly or semi-weekly, rather than daily. Even so, newspapers in the Founding Era and later, during Reconstruction, provided average Americans with their principal access to all the critical events and documents of their time, along with coverage of local and international news. Although newspaper subscribers tended to be “elites,” newspaper content was widely shared by word of mouth: ultimately, most Americans in the Founding Era, including those who would be classified as illiterate or poorly educated by today’s standards, got their news from newspapers.

20. Since the 1960s, database compilers have been able to track contemporary spoken English more successfully, though none of the databases for the Founding Era and for the post-Civil War period cover the spoken language of Americans. Although scholars can reconstruct some of that oral language, we are always doing so through the lens of print versions purporting to represent or comment on ordinary speech.

21. The newspaper databases that I have examined are Readex Historical American Newspapers; Chronicling America (newspapers digitized by the Library

of Congress); the British Newspaper Archive (a service of the British Library); and two private subscription services, newspapers.com and newspaperarchive.com. For this report, both Readex and newspapers.com provide the most-complete picture of the language of the Founding Era newspapers as well as the ordinary language of the later nineteenth century.

22. All the databases contain some duplicates. COFEA and COEME digitize multiple editions of the same work; and the newspaper databases not only duplicate some, though not all, of one another's content, but they also contain a number of duplicate stories because, particularly in the period of newspaper growth during the nineteenth century—in an age before the wire services and syndication appeared, and before the larger papers began to set up news bureaus in key areas around the country and around the world—newspapers routinely printed each other's stories, sometimes acknowledging their source and sometimes not. Still, the databases often offer more insight into the meaning of words and phrases than simply going to a dictionary. Jurists from Learned Hand and Felix Frankfurter to Frank Easterbrook and Richard Posner have warned their colleagues not to make a fortress of the dictionary. The corpora are by necessity incomplete. LCL does not replace dictionaries, but it does provide an important supplement to them.

The meaning of arms and accoutrements in the databases

23. I was asked to look at the meaning of “arms” and “accoutrements” as used individually, along with the phrase “arms and accoutrements” in the Founding Era and during the period immediately following the adoption of the Fourteenth Amendment. I focused on whether the term “magazine” as used today falls within the meaning of the term “arms” when used on a standalone basis during those eras. I was also asked to look at lexical evidence in the Founding Era for the names of inventors associated with the “air rifle,” or “air gun,” and to assess any lexical evidence about the availability and popularity of the repeater air gun.

24. In the eighteenth and nineteenth centuries, “magazine” was a word that meant “storehouse, depot.” A magazine was a place, often a building or warehouse, to store goods and supplies. When used in a military sense, a magazine was a building designated for storing gunpowder, and as such, it was subject to strict regulation. Because gunpowder was an explosive substance, some towns banned or heavily regulated the storage of gunpowder within city limits. The word “magazine” was not typically used to refer to the compartment of a gun containing bullets until late in the nineteenth century. Although the term “magazine” appears in the phrase “magazine wind gun” in 1744, that usage is marked as “rare” by the Oxford English Dictionary, which also marks the phrase “magazine wind gun” as “obsolete.” In its separate, main entry for “magazine,” the OED gives the earliest use of “magazine” meaning “a bullet storage container” as 1888, and the term remained relatively rare

until the 1920s. Before that time, bullets were kept in “cartridge boxes,” sometimes called “cartouch boxes,” or “cartridge cases” or pouches, and these bullet storage containers were part of the general category of military accoutrements, not arms.

25. The data suggests that “cartridge boxes,” and therefore today’s LCMs, would have been viewed as accoutrements, the ancillary equipment associated with soldiering, or service in the military.

26. The OED defines “accoutrements” as, “items of apparel; (more generally) additional pieces of dress or equipment, trappings; (Military) the outfit of a soldier other than weapons and garments.” [OED online, s.v. “accoutrement”; the word typically appears as a plural.]

27. Thus, the military sense of “accoutrements” generally refers to other accessories worn or carried by soldiers. The OED illustrates this second, military, sense, with an example from the Duke of Wellington’s dispatches in 1813: “In order to collect the wounded and their arms and accoutrements.” Here Wellington, widely recognized as a consummate soldier, and who would soon defeat Napoleon at the Battle of Waterloo in 1815, makes a clear distinction between “arms” and “accoutrements.”

28. The OED definitions are instructive. But in order to determine more specifically whether the term “accoutrements” included “cartridge boxes,” the predecessor to modern magazines, I consulted two digitized historical databases:

COFEA and COEME. A COFEA search returns these examples where “cartridge boxes” and “cartouch boxes” are specifically included in the category of accoutrements, not arms:

- a) 1774 – “The cartouch boxes and other military accoutrements belonging to the noncommissioned officers and privates....” (Journals of the Continental Congress).
- b) 1774 – “The cartouch boxes and every other species of military accoutrements annexed to the persons of the officers and soldiers of General Burgoyne’s army.” (Journal of the Continental Congress).
- c) 1776 – “The General is surprised to find the Militia applying for Cartouch Boxes and other Accoutrements.” (George Washington, General Orders, February 17).
- d) 1777 “Many of their Arms are indifferent, and almost the whole [of Washington’s troops] are destitute of pouches and Other necessary Accoutrements.” (George Washington, Letter to John Hancock, October 10–11; the pouches in question are ammunition holders).
- e) 1777 – “The officers and men were to ... deliver up their arms, the cartouch boxes and other military accoutrements....” (William Duer, Congressional Resolution: A State of Facts, December).
- f) 1778 – “[T]he board, on the 17th of April, impowered a Capt. Starr of Middleton in Connecticut to receive a quantity of public leather of Colo. Trumbull, and get it made up into shoes and accoutrements, half of each, the cartridge boxes upon the new model; and to send on both to the main army....” (Timothy Pickering, Letter to George Washington, June 9, 1778. At the time, cartridge boxes were made of wood or leather, or a combination of the two).
- g) 1783 – “And as to cartridge boxes and other leathern accoutrements, saddles & other furniture for dragoons.... ” (Timothy Pickering, Letter to George Washington, April 22).

29. And COEME adds this example, where “cartridge box” appears in a list that includes “accoutrements” but not “arms”:

- a) 1788 – “If you could only tell us how to keep papa at home, my drum, spontoon, cartouch box, and accoutrements, should all be yours.” (*The Children’s Friend, Translated from the French*).

30. My review of the corpora also confirmed that “accoutrements” are regularly referred to separately from “arms.” A COFEA database search for the occurrence “accoutrements” within 6 words of “arms” returned 873 hits (including a small number of duplicates). A similar search of COEME returned 126 hits, the earliest from 1656. I determined that the two search terms, “arms” and “accoutrements,” often appear together as a single phrase, “arms and accoutrements,” typically in military contexts having to do with an army or militia unit. “Accoutrements” often occurs in a list alongside, but separate from, ammunition: “arms, accoutrements, (and) ammunition,” though when ammunition is not listed separately, the term “accoutrements” will generally include ammunition.¹

31. “Arms” as a stand-alone term refers to weapons. “Arms” almost never includes ammunition or ammunition storage containers such as cartridge boxes. These are the three examples that a COHA search returns:

¹ The second OED citation for “accoutrements,” dated 1902, differentiates “ammunition” and “accoutrements”: “When they landed they brought on shore besides a quantity of ammunition and accoutrements...and large stores of flour, sugar and tobacco, &c.” (G. S. Whitmore, *Last Maori War* i. 4).

- a) 1821 – “It is necessary to obtain ammunition, arms and accoutrements, and as many horses as you can get” (William Dobein James, “A Sketch of the life of Brig. Gen. Francis Marion and a history of his brigade”).
- b) 1909 – “Lyon was ordered to deliver to Governor Yates 10,000 stand of arms with accoutrements and ammunition.” (Robert J. Rombauer, “The Union Cause in St. Louis in 1861”).
- c) 1949 – “It will be necessary that arms, ammunition, accoutrements, tents and camp equipage be deposited there for them the troops.” (Francis F. Beirne, “War of 1812”).

32. The “cartridge box” or “cartouch box”—the precursor to today’s “magazine”—is typically mentioned in lists of accoutrements, often in connection with other items worn with a soldier’s uniform. The “cartridge box” almost never appears to be included among a soldier’s weapons. The OED defines “cartridge box” as “a box for storing or carrying cartridges; the case in which a soldier carries his supply of cartridges” (OED online; this definition covers “cartouch box” as well). The OED cites the definition in Smyth and Belcher’s *Sailor’s Word-Book* (1867) to illustrate its function. Here is the full definition of “cartridge-box” in in that nautical dictionary: “a cylindrical wooden box with a lid sliding upon a handle of small rope, just containing one cartridge, and used for its safe conveyance from the magazine to the gun—borne to and fro by the powder-monkeys (boys) of old. The term is loosely applied to the ammunition-pouch” (Admiral W. H. Smyth and Vice-Admiral Sir E. Belcher, *The Sailor’s Word-Book: An Alphabetical Digest of Nautical Terms*, London, 1867; see ¶ 57, below, for the authors’ definition of “magazine” as a gunpowder storeroom either on land or on a ship).

33. A search of Readex America's Historical Newspapers for "cartridge box," and the synonymous "cartouch-box," for the Founding Era years 1750–1790 returns 176 citations, including multiple duplicates. A Readex search for the period after the adoption of the Fourteenth Amendment, from 1868–1890, returns 1,306 citations, also with many duplicates. The following examples show instances where "cartouch boxes" or "cartridge boxes," are treated as categories separate from arms. Note that in example (d) the list separates small arms from cutlasses as well. And example (j) clearly shows that cartridge boxes are accoutrements, not arms:

- a) 1756 – "Every such Male Person . . . provide himself with one well fixed Musket, or Fuzee, with a Worm and Priming Wire, one Cartouch Box, with nine charges of Gun Powder, and Ball suitable therein, and three good Flints . . . and shall keep such Arms and Ammunition by him, in good Order." *Pennsylvania Gazette*, May 13, 1756.
- b) 1774 – "That each man be provided with a good firelock and bayonet fitted thereon, half a pound of powder, two pounds of lead, and a cartouch box, or powder-horn and bag for ball, and be in readiness to act on any emergency." Proceedings of the Continental Congress, *Pennsylvania Journal*, December 21, 1774.
- c) 1775 – "That each Inhabitant, or Person, as aforesaid, who shall provide Arms for himself, well fixed with a good Bayonet and Cartouch-Box, shall be paid a minimum of 10s." *The Massachusetts Gazette*, May 19, 1775.
- d) 1775 – "We hear from Charlestown, South-Carolina, that on the 21st of March, at Night, about eight Hundred Stand of Small Arms, 2 Hundred Cutlasses, and all the Cartouch-Boxes, fit for Service, with several Bundles of Match & some Flints, were taken out of the public Armoury." *New Hampshire Gazette*, June 2, 1775.
- e) 1775 – "Deserted from Colonel Woodridge's regiment . . . Martin Nash . . . carried away a long gun of Gen. Pomeroy's make, a cartridge box

and good stock of ammunition belonging to the province.” *New England Chronicle*, November 9, 1775.

- f) 1778 – “numbers of the cartouch-boxes and several other articles of military accoutrements annexed to the persons of the non-commissioned officers and soldiers in General Burgoyne’s army, have not been delivered up.” *Massachusetts Spy*, February 19, 1778.
- g) 1778 – “List of Necessaries and Accoutrements for each Horseman: 1. A well-tempered sword . . . 2. A carbine, fusee, or short blunderbuss . . . 3. A pair of pistols and holsters. 4. A sword-belt—a belt for the carbine . . . 5. A cartridge-box to buckle round the waist, with twelve tin pipes for the cartridges. 6. A helmet . . . 7. A saddle....” *New-Jersey Gazette* March 25, 1778.
- h) 1785 – “A Neapolitan officer was killed in the same engagement by a cartouch box taking fire while charging the guns.” *South-Carolina Weekly Gazette*, August 4, 1785.
- i) 1787 – Abstract from the Militia Law. “That every non-commissioned officer and private soldier of the said militia . . . shall equip himself . . . with a good fire-arm, with a steel or iron ramrod, a spring to retain the same, a worm, priming wire and brush, a bayonet fitted to his fire-arm, and a scabbard and belt for the same, a cartridge box that will hold fifteen cartridges at least, six flints, one pound of powder, forty leaden balls suitable for his fire-arm, a haversack, blanket, and canteen.” *Massachusetts Gazette*, February 2, 1787.
- j) 1787 – “All persons liable to do Militia Duty . . . must provide themselves with proper arms and accoutrements, viz. a musket and bayonet, a cartouch box or pouch that will contain twenty-four cartridges.” *State Gazette of South Carolina*, July 16, 1787.
- k) 1868 – “Government Sale at Watertown Arsenal Mass. . . . Lot of cavalry accoutrements, consisting of Cartridge Boxes, Pistol Holsters, Sabre Belts, Knots, &c.: lot of Infantry accoutrements, consisting of Bayonet Scabbards, Cap Pouches, Cartridge Boxes, Gun Slings.” *Evening Star* (Washington, D.C.), January 9, 1868. [Perhaps the clearest and most direct citation specifying cartridge boxes as accoutrements.]

- l) 1868 – Another government sale lists weapons (carbines, muskets, rifles, and pistols) followed by a list of items that are separate from weapons: “254 carbine cartridge boxes,” carbine slings, cavalry sabre belts, bayonet scabbards, cap pouches, “1,619 cartridge boxes,” “257 cartridge-box Belts,” gun slings, waist belts, “and various other articles.” *Daily Morning Chronicle* (Washington, D.C.), April 22, 1868.
- m) 1869 – This account describes the new French “Mitrailleuse,” a field weapon which would seem to be analogous to what we call a machine gun today, and the cartridge box would be the equivalent of what today we call a removable magazine. The Mitrailleuse is “a new ‘ball syringe’ in the shape of a small cannon. . . . It contains thirty-seven common infantry cartridges, arranged like cigars in a bundle. As soon as it is attached to the breech of the cannon, the Mitrailleuse is loaded. A man sitting on the carriage fires it by turning a crank. . . . The crank is turned once more and the cartridge box is removed from the cannon; a man to the right takes it, removes it from the ‘cigar box’; the men to the left put a new one in.” *Daily Albany Argus*, November 6, 1869.
- n) 1870 – In this description of the French National Guard, the writer notes the importance of rapid-fire rifles for defense against the Prussian troops. Several paragraphs later, the cartridge box is listed along with a guard’s uniform requirements: “a uniform will be obligatory for all. Each one must be provided with a weather-proof knapsack. . . , a cartridge-box or pouch, and a half-woolen covering of the material of a tent.” *New York Tribune*, November 5, 1870.
- o) 1871 – Article about a memorial statue in which the cartridge box is identified as part of the soldier’s uniform: “a soldier dressed in full uniform (overcoat, cartridge box, belt, etc.,) leaning on his musket.” *Boston Journal*, November 12, 1870.
- p) 1872 – This list of government ordnance and ordnance stores for sale groups weapons and accoutrements separately, with cartridge boxes clearly identified as accoutrements. The weapons for sale are muskets, rifled muskets, and revolvers, followed by this comment, “Nearly all the Starr’s Revolvers and about two-thirds of the other arms are in fair order.” After the arms list comes the list of accoutrements, consisting of cap pouches, waist belts, bayonet scabbards, “cartridge box and belt plates,” musket and pistol appendages, “and an assortment of other

accoutrements and appendages.” *Daily Morning Chronicle* (Washington, D.C.), February 3, 1872.

- q) 1876 – In this description of a dead body of a soldier found on a beach, the cartridge box is described as an article of the deceased’s uniform: “The body was clothed in a blue overcoat and pants, and had on waist-belt, cross-belt and cartridge-box.” *Wilmington Morning Star* (North Carolina), February 8, 1876.
- r) 1879 – The cartridge box forms part of a new military uniform: “In the rest of the brigade the multiplicity of belts is done away with, and in place is substituted a simple body belt to which the bayonet scabbard and cartridge box is attached. Equipped in such a uniform . . . the brigade will present a solid and soldierly appearance.” *New Haven Register*, July 28, 1879.

34. In sum, in the vast majority of examples, arms referred to weapons. Arms generally did not include ammunition or other weapon accessories, including the historical analogue to the magazines. Instead, “cartridge boxes” and “cartouch boxes” were considered “accoutrements,” or uniform accessories, like the other military equipment (scabbards, belts, and so forth) that was separate from, and did not include, arms.

35. But English usage is never simple. As linguists often say, “all grammars leak”—which is to say, there are always a few counterexamples in the data. The existence of counterexamples does not invalidate the data or undercut an interpretation, it simply shows that although the users of a language share a common sense of what words and grammatical constructions mean, variation in meaning and usage occurs in all human language. Given the volume of samples, that is not

surprising. Thus, for example, in COFEA, “accoutrements” does occasionally encompass arms, as in this example:

A few years since, some boys, equipped in mock military accoutrements, such as paper-caps, paper-belts, wooden swords, &c. were beating up for recruits in Parliament-street, Boston. [*The American jest book*: Part I[-II], 1789; emphasis added; here military accoutrements includes toy swords.]

In addition, four of the Readex newspaper citations appear to sweep cartridge-boxes or cartouch-boxes into the broader category of arms. However it is not clear from the context in these examples whether cartridge boxes are arms or accoutrements:

- a) 1753 – “[E]very listed Soldier and other Householder . . . be always provided with a well-fix’d Firelock . . . a Snapsach, Cartouch Box, one Pound of Powder, twenty Bullets fit for his Gun, twelve Flints, a good Sword or Cutlass, a Worm and Priming Wire, on penalty of six Shillings for want of such Arms as is hereby required, and two Shillings for each other Defect.” *Boston Post-Boy*, April 30, 1753. Considering citation (c), below, dated 1756, it is likely that the fine for not having a cartouch box in this example would not be the higher fine for a weapons defect, but rather the lower fine of 2s. levied for “other defects.”
- b) 1755 – “whoever provides himself a good Firelock, Sword or Hatchet, Belt and Cartridge-Box, to receive 16s. more . . . but the Arms to be returned when the Service is over.” *Boston Gazette*, April 21m 1755. It is not clear from the context whether the cartridge boxes are part of the arms that must be returned. In other articles, cartridge boxes are treated as a soldier’s personal items. They may bear a variety of decorations, and they are sometimes listed along with other uniform items in a description of a soldier’s funeral.
- c) 1756 – “That every Male Person . . . shall . . . provide himself with one well fixed Musket, or Fuzee, with a Worm and Priming Wire,

one Cartouch Box with nine Charges of Gun Powder, and Ball suitable therein, and three good Flints . . . and shall keep such Arms and Ammunition by him, in good Order, and fit for Service, at all Times . . . under the Penalty of Twenty Shillings for Want of a well fixed Musket or Fuzee, with a Worm and Priming Wire, and Two Shillings for the Want of every Cartouch Box, and Two Shillings for the Want of nine Charges of Gun Power and Ball, and three Flints, or any of them.” *Pennsylvania Gazette*, May 13, 1756. The larger fine for lack of arms, along with lower fines for missing Cartouch Boxes and ammunition, suggest that cartouch boxes and cartridge boxes do not belong to the category “arms” but are instead a form of accessory.

- d) 1785 – “His European weapons consisted of a musket, bayonet and cartouch-box; a fowling piece; two pair of pistols; and two or three swords or cutlasses.” *History of Capt. Cook’s Voyage, Massachusetts Centinel*, January 15, 1785. Here cartouch box appears among the list of weapons carried by an islander that Cook encountered.

36. Another cite, from 1777, refers to firearms and other military accoutrements, implying, too, that arms may be a subcategory of “accoutrements”:

“any drafted soldier . . . who is unprovided with a fire-arm, and other military accoutrements prescribed by the militia law.” Massachusetts, Acts & Laws, March Session, Colony of Massachusetts Bay, 1777, p. 10 (but see Par. 38, ex. a).

37. But the fact that “arms” are sometimes included as a subcategory of “accoutrements” does not mean that “arms” includes weapon accessories or other “accoutrements.”

38. Moreover, despite a handful of exceptions like those just cited, in literally hundreds of cases, “arms” and “accoutrements” are treated as separate categories of military gear. Here are some typical examples from the Founding Era:

- a) 1776 – “The Sum of ten Shillings ... to purchase said Fire Arms and Accoutrements” (Acts and Laws March Session, Colony of Massachusetts Bay; here arms and accoutrements are separate, unlike the citation from 1777, above, from the same source, where arms and accoutrements are lumped together).
- b) 1780 – “arms, ammunition, accoutrements, drums and fifes in possession of the respective regiments” (George Washington, General Orders January 22).
- c) 1783 – “Such of the Noncommissioned officers and privates ... shall be allowed the fire arms and accoutrements as an extra reward” (George Washington, General Orders, May 1).
- d) 1795 – “you will march with arms and accoutrements in good order.” (*Incidents of the Insurrection in the Western Part of Pennsylvania, in the year 1774*. This example is from COEME; the other examples in this list are from COFEA).
- e) 1798 – “To hold his powder and his ball, his gun, accoutrements and all”[French Arrogance, or, “The Cat Let Out of the Bag.” This poetic example shows that the idiomatic phrase arms and accoutrements has become part of the general language available not just to military specialists but also to poets and novelists.]

39. A newspapers.com search for “accoutrements” returns 1,392 hits.

There are 692 matches for the exact phrase “arms and accoutrements.”

40. Here is a mid-eighteenth-century British example from the newspapers.com corpus where *arms* and *accoutrements* are separate categories, as is *ammunition*: “This Militia shall receive their Arms, Accoutrements, and Ammunition from the Ordnance.” *Derby Mercury*, March 19, 1756, p. 3.

41. Similarly, there is this “ploughshares into swords” example of a Cambridge University library to be converted to military use: “[T]he new Building

intended for a publick Library . . . may be converted into a Barrack, and be supplied with Provisions, Arms, and Accoutrements, at the Expence of the University.” (*Jackson’s Oxford Journal*, March 20, 1756, p. 2).

42. A search of “arms and accoutrements” in the Readex database of America’s Historical Newspapers returns 3,103 hits from 1750–1800; and 2,036 hits from 1868–1880. This early example from the colonial period appeared in the *Boston Evening Post* in 1750. It distinguishes “arms” from uniforms, “accoutrements,” and other military equipment: “All Gentlemen Volunteers [in Nova Scotia] . . . shall be completely Cloathed in blue Broad Cloth, receive Arms, Accoutrements, Provisions, and all other Things necessary for a Gentleman Ranger.”

43. This cite from the *Pittsburgh Gazette* in 1789 reflects a clear sense that “arms” and “accoutrements” are distinct categories in the new nation as well: “The militia . . . must be considered as the palladium of our security The formation and discipline of the militia of the continent should be absolutely uniform; and that the same species of arms, accoutrements, and military apparatus, should be introduced in every part of the United States.”

44. The text of a bill in Congress to establish a uniform militia appeared in the *New York Journal* in 1790. It confirms the Founding-Era sense that “arms,” “ammunition,” and “accoutrements” make up distinct and separate elements of a soldier’s kit: “There shall be appointed an adjutant general for each state ... whose

duty it shall be to ... report[] the actual situation of their arms, accoutrements, and ammunition.... Every non-commissioned officer or private ... for appearing at such meeting or rendezvous without his arms, ammunition, or accoutrements, as directed by this act, shall pay the sum of twenty-five cents.”

45. And this cite from 1868 clearly distinguishes what counts as “arms,” and what counts, separately, as “accoutrements”: “At Watertown Arsenal, Massachusetts ... the following Arms, &c., will be sold: 10,699 rifled and smooth-bore Muskets ... ; 261 Carbines ... ; 305 Sabres ... ; lot of cavalry accoutrements, consisting of Bayonet Scabbards, Cap Pouches, Cartridge Boxes, Gun Slings, Waist Belts, &c.” *Daily Morning Chronicle* (Washington, DC).

46. The newspaper data parallels that of COFEA: the phrase “arms and accoutrements” is almost always military. The phrase sometimes occurs alongside “ammunition” as a separate list item. “Accoutrements,” when it appears alone in a military context, is a more general term, used for gear and rarely, for arms as well.

47. It is clear that “arms and accoutrements” was, during the eighteenth and nineteenth centuries, a common military phrase, in both England and America. English often yokes terms commonly found together into idiomatic pairings, sometimes called binomials, like “bacon and eggs,” “salt and pepper,” or, in a legal context, “assault and battery” or “breaking and entering.” Such pairs take on the characteristics of a formula and often appear in the same order (this order may be

dictated by logical succession of events, or it may be random). “Eggs and bacon” is rarer than “bacon and eggs.” And it would be unusual to find “battery and assault.” Such ordered pairs are called “irreversible binomials,” though there is nothing but custom (as in “salt and pepper”) and sometimes logic (as in “breaking and entering”) to prevent anyone from reversing the order.

48. The word “accoutrements” typically occurs in a list after “arms” (more rarely, it may occur before “arms” as well), and it is typically a separate category from “arms” (though not always, as the above examples show).

49. There are over 47,000 citations in newspapers.com for “arms” or “accoutrements” in the period 1868–1900, and 15,799 cites for the exact phrase “arms and accoutrements.” Examining a selection of the 15,799 citations of the phrase confirms that both in England and the United States, “arms” and “accoutrements” are separate categories. Here is one example from Gloucestershire, in England, in 1868: “[A] letter was received from the Home Secretary, pointing out the danger of permitting an accumulation of arms and accoutrements to take place in prisons, and requesting, if there were any arms or munitions of war stored in the prison, that they should be removed to the nearest military depot.”

50. A similar cite from Iowa in 1868 states: “Persons having in their possession any arms, accoutrements or ammunition belonging to the State, are requested to return the same at once to the Adjutant General, as proper places have

been provided by the State for the safe keeping of all such property.” *Cedar Falls Gazette* (Cedar Falls, Iowa).

51. And this, from Stroudsburg, Pennsylvania, also 1868, states: “More than half of the Seventh Cavalry (Custer’s) decamped with their horses, arms, and accoutrements, and probably made their way to the gold regions of Colorado and Montana.” *The Jeffersonian* (Stroudsburg, Pennsylvania).

52. The circa-1868 data confirmed the Founding Era data that “accoutrements” is primarily a military term, and that when “accoutrements” co-occurs with “arms,” the terms refer to separate categories of equipment.

53. One final note on “accoutrements”: the United States Supreme Court’s recent decision in *New York State Rifle and Pistol Association v. Bruen* (No. 20-843, 2022) references *North Carolina v. Huntley* (25 N.C. 418, 1843), a decision by the North Carolina Supreme Court affirming Huntley’s conviction for carrying a shotgun illegally “to the terror of the people,” as forbidden by the Statute of Northampton in 1328. In that decision, the North Carolina Supreme Court stated, “A gun is an ‘unusual weapon,’ wherewith to be armed and clad. No man amongst us carries it about with him, as one of his everyday accoutrements—as a part of his dress.”

54. In the citation above, “accoutrements” does not refer to weaponry, but to the more general category of “everyday attire, or clothing.” The court is saying

that it may be normal to wear a shirt, or a belt, or shoes, but it is not normal to wear a gun in North Carolina in 1843. It is legal—the court agrees—to carry a gun for any lawful purpose, “either of business or amusement”—but it is not normal or typical to do so. In affirming Huntley’s conviction, the court noted that his purpose in carrying a shotgun was not a legal one.

Some early use of the words “magazine” and “magazine wind gun,” along with instances of repeater air guns in the Founding Era

55. Although most uses of the word “magazine” still refer to printed periodicals, during the nineteenth century, one sense of the term *magazine* narrows, referring more and more to an “ammunition container,” a primary sense of the word in reference to firearms today. The OED defines *magazine*, sense IV b, as “A container or (detachable) receptacle in a repeating rifle, machine-gun, etc., containing a supply of cartridges which are fed automatically to the breech,” with the earliest citation in this sense from 1868. It is noteworthy that as late as 1867, the nautical dictionary *The Sailor’s Word-Book* retains the older definition of “magazine” as a gunpowder storage facility on land or at sea: “A place built for the safe-keeping of ammunition; afloat it is confined to a close room, in the fore or after part, or both, of a ship’s hold, as low down as possible; it is lighted occasionally by means of candles fixed in the light-room adjoining it, and no person is allowed to

enter it with a lamp or candle” (Admiral W. H. Smyth and Vice-Admiral Sir E. Belcher, *The Sailor’s Word-Book: An Alphabetical Digest of Nautical Terms*, London, 1867; the authors suggest that the placement of the magazine room “as low down as possible” minimizes the risk of a direct hit by enemy fire, and they note as well that no one is permitted to carry a lighted flame into the ship’s magazine room to minimize the risk of an accidental explosion; see ¶ 34, above, for the authors’ definition of the term “cartridge-box” to refer to the box or pouch used for transporting ammunition to a small arm or a large gun). In addition, Smyth and Belcher define “repeating fire-arm” as “One by which a number of charges, previously inserted, may be fired off in rapid succession, or after various pauses. The principle is very old, but the effective working of it is new.” Their definition—which does not mention “magazine” in connection with such guns—acknowledges the existence of earlier repeater guns, but judges them to have been ineffective. Only the repeater guns designed and manufactured in quantity during the period just before the dictionary’s publication in 1867 are actually judged to be “effective.” The earliest example in COHA of “magazine” referring to the ammunition compartment of is dated 1882: “Solitary travelers still find it prudent to make a display of a magazine rifle, and to keep a sharp eye on any roving bands” (E. V. Smalley, “The New North-West,” *Century*, September, 1882, pp. 769–79). COHA lists only 40 examples of “magazine rifle,” most of them between 1890 and 1930. “Magazine

gun” appears in the COHA data 16 times between 1920–2010. And an 1893 editorial in the *New York Times* refers to the army’s “new magazine rifle” (“New Powder for the Army,” *New York Times*, December 7, 1893, p. 4). However, as with a very few instances of “accoutrements” including “arms,” there are an extremely small number of early counterexamples between 1744 and 1820 where “magazine” refers to the bullet compartment of a gun—not a pistol or rifle using conventional gunpowder and bullets, but an air gun.

56. The common, single-shot “wind gun” or “air gun” used compressed air rather than ignited gunpowder to propel a ball, and was much quieter than a traditional gun. Although the air gun did not require powder or a match, the user had to re-charge the compressed air cylinder once the air had been expended. The writer Oliver Goldsmith found air guns to be useful for experiments in physics, adding, “THIS, however, is but an instrument of curiosity, and sometimes of mischief” (Oliver Goldsmith, *A survey of experimental philosophy, considered in its present state of improvement*, 1776). This newspaper story reports that the scientist Joseph Priestley was injured by an accidental discharge of an air gun: “We hear from Birmingham, that the celebrated Dr Priestley, in a late trial of some experiments with an air gun, was badly wounded by an accidental discharge of it; the ball with which it was loaded, passing thro’ one of his hands, and shattering it to pieces” (*The Leeds Intelligencer and Yorkshire General Advertiser*, June 5, 1781, p. 3).

57. A number of newspaper references suggest that its quietness made the air gun popular with criminals, and many references to air guns refer either to accidental discharges or to criminal assaults (for example, numerous newspaper accounts in 1785 suggested that the weapon which broke a window in the carriage of King George III was an air gun).

58. Air guns typically fired a single shot. However, there are references in the corpora to approximately eight inventors between 1744 and 1820 who built air guns capable of firing anywhere from 9 to 50 balls without reloading the ammunition or recharging the compressed-air cylinder. Lexical evidence suggests almost all of these repeater air guns were experimental models rather than guns available for military or civilian use.

59. The OED dates the term “magazine wind-gun” to 1744 in a reference to an air gun capable of firing more than one shot without reloading. “Magazine wind-gun” is the term used by its inventor, a man named L. Colbe. I have found no other examples of the term “magazine wind gun” in any database, suggesting that the phrase is a *hapax legomenon*, or “oncer,” terms that lexicographers use to define a word that merits a definition, but that does not appear anywhere else. Colbe also uses the term “magazine gun” for his device, and that term does occur twice more in the data, suggesting that it was never a common term. In an entry separate from its

entry for “magazine,” the OED marks the usage of both “magazine wind gun” and “magazine gun” as “rare” and “obsolete”:

†magazine wind-gun *n.* *Obsolete rare* a type of wind-gun fitted with a magazine of bullets. 1744 J. T. Desaguliers *Course Exper. Philos.* II. 399 An ingenious Workman call'd L. Colbe has very much improv'd it [sc. the old Wind-Gun], by making it a Magazine Wind-Gun; so that 10 Bullets are so lodg'd in a Cavity ... that they may be ... successively shot. [Oxford English Dictionary Online, s.v. magazine wind-gun.]

60. The OED citation is from John Theophilus Desaguliers, *A Course of Experimental Philosophy* (London, 1744), vol. II: 399-402. Desaguliers was a member of the Royal Society and an assistant to Isaac Newton specializing in mechanics and hydraulics. In his treatise, he offers an elaborate description of the common, single-shot wind gun, more typically referred to as an air gun, along with a three-page description of Colbe's so-called “Magazine Wind-Gun,” accompanied by a detailed drawing of the mechanism of that gun. I have found no biographical information about L. Colbe, inventor of the gun, and I have found no lexical evidence that Colbe made more than one such gun, or if he did, that it was produced in any significant numbers. Although Desaguliers suggests that this “magazine gun” may be “the best Defence against Highway-men, or Robbers that Travellers are aware of because when they have cause to suspect them, they may make five or six Discharges before a Thief can come within Pistol-Shot” (p. 402), there is no evidence in any of the corpora that Colbe's invention was ever used either by the military or by civilians for individual self defense. And there is no lexical evidence that the other repeater

air guns invented before the mid-nineteenth century were ever more than a curiosity until workable models of what we now call machine guns using conventional gunpowder and bullets, not compressed air and balls, were produced during and after the Civil War.

61. As further confirmation that the magazine wind gun was an anomalous and uncommon term, the OED definition of “magazine,” updated most-recently in 2022, gives the earliest date of the sense of the word as ‘a bullet-container’ as 1888. The corpus evidence confirms that the magazine wind gun is correctly dated by the OED as 1744, and I have found only two references to “magazine guns” in the 1790s and early 1800s, confirming that this usage of the word remained rare. “Magazine wind-gun” and “magazine gun” do not appear in the COEME or COFEA corpora. I have found no information in the corpora on the availability or popularity of such guns, but the sparse lexical data suggests that they were not in common use.

62. A small number of references to later repeater wind guns indicate they were made, not by armourers, but by clockmakers and other highly-skilled artists or artisans. There is no indication in the lexical evidence that repeater air guns were ever mass produced or publicly available in the Founding Era (1776-1820). Several of the citations I found treat these guns as curiosities and their owners charge a small fee to anyone interested in looking at them (and in one case, trying the gun out). Like Colbe’s wind gun, they seem to be rare inventions or curiosities, not weapons

commonly available to the military or to the American or English public. Besides Colbe's gun, there are only two examples from the data that use the word "magazine" in connection with a repeater air gun:

- a) 1784 – "An artist of this town [Birmingham, England; the artist is also identified as a compass maker] has lately invented a magazine gun, that will discharge 45 bullets separately in two minutes and a half, each bullet would kill an ox at 40 yards distance; it is only charged once, and aim is taken with more certainty than with the fowling piece" (*New York Packet and American Advertiser*, New York, NY, August 5, 1784).
- b) 1815 – Advertisement for "one magazine Gun, when once loaded can be discharged ten times in a minute" (*New York Gazette*, Aug. 30, 1815).

63. The corpora contain just nine other references to repeater air guns, none of them using the word "magazine":

- a) 1783 – "Vienna. A watchmaker has invented an Air Gun, which, without recharging, fires 15 times successively. A corps of Hunters are to be armed with these guns." (*The Newcastle Weekly Courant* (England), May 10, 1783, p. 3). There is no follow-up to indicate whether the corps of Viennese hunters did employ such a weapon.
- b) 1792 – A number of American newspapers report on the invention by a man, only identified as someone from Rhode Island, of a repeating air gun capable of firing twenty times without reloading. Here is one: "A person in Rhode Island has invented an Air-gun, which can be discharged, to do execution, 20 times, each time it is loaded.—As nothing is cheaper, and easier to be transferred, than the ammunition for the above pieces; and as saving much expense, they recommend themselves strongly to the Secretary at War, to be used in the approaching campaign against the Indians" (*National Intelligencer: National Gazette*, April 26, 1792, p. 3). There is no indication that the Secretary of War acted on this suggestion. In fact, the following advertisement suggests that the repeater air gun in question was treated as a curiosity to be admired in a museum:

- c) 1792 – “An air-gun, made by a young man, a native of Rhode-Island, but now resident in this city [New York], and which has been purchased by the subscriber, with a view eventually to make it the property of the American museum but wishes to reimburse himself in the following manner, viz. He will exhibit it to the examination of all persons desirous of viewing it, and of discharging a shot, for which they shall pay sixpence. This gun, when properly filled with air, will do execution twenty times, without renewing the charge, and for several times will send a ball thro’ an inch board, at the distance of sixty yards, to be seen at the subscribers, No. 13 Maiden Lane, every day in the week, from 10 to 12 in the forenoon, and from 3 to 5 in the afternoon, Tuesday and Friday afternoons excepted, at which time it may be seen at the Museum. Gardiner Baker, Keeper of the Museum” (*New York Daily Advertiser*, February 9, 1792).
- d) 1796 – “This carabine, lighter and smaller than the common ones, is composed of two barrels, the smallest of which contains 25 balls: and by a slight movement, they pass from the one to the other; which ball, by lowering the firelock, goes off with the same rapidity and carries further than if fired with powder, without the least noise, and that as often as a hundred times alternately, during the space of 8 or 10 minutes; after which, the reservoir being exhausted, it requires to pump in fresh air, which takes up at most, 16 minutes (*The Independent Gazetteer* (Philadelphia), August 6, 1796, p. 1). This report adds that the repeater air gun, invented in the reign of Emperor Joseph II (reg. 1765–1790), was distributed to German troops, and that a sample weapon was given to the Prince of Wales. The writer suggests such guns would be useful at sea, since they are not affected by dampness. But there is no indication in the corpora that the Royal Navy ever considered such a weapon.
- e) 1797 – “An Air GUN has been constructed by Messrs. Darlings and Wilkinson, of Cumberland, Rhode Island, upon a plan entirely new. It can be discharged twelve times with once loading, and will do execution with great exactness, at fifty yards distance” (*Columbian Centinel* (Boston), June 21, 1797).
- f) 1801 – Multiple newspapers run the story of a repeater air gun invented by a man known as Girardami, identified as a peasant, artist, and watchmaker, and variously referred to in gun history articles as Girandoni or Girardoni (those spellings do not appear in the corpora

that I consulted): “Girardami, a Tyrolese peasant, and self-taught artist, has invented an air-gun, which may be discharged fifty times without pumping again. The first twenty shots penetrate through a door at an uncommon distance. Girardami makes these air-guns himself, and likewise very good wooden watches” (*The Caledonian Mercury* (Edinburgh), March 2, 1801, p. 2).

- g) 1802 – The Newly-Invented Philosophical Air Gun That can be used as Gun or Pistol, and discharge 20 balls with one loading of the globe [that is, the compressed-air cylinder], unless the charge of air is let out at once. To be seen at Mr. Wyant’s tavern, Market street, both night and day. Admittance one fourth of a dollar (*Telegraphe and Daily Advertiser* (Baltimore), March 17, 1802). “Philosophical” in this sense is often used to refer to physicists experimenting with air guns to measure air temperature, pressure, and volume, among other things (see, for example, the work of Desaguliers and the experiments of Goldsmith and Priestley mentioned above).
- h) 1807 – An ad for an auction includes, among other items, “an air gun in compleat order which, when loaded will discharge twenty five times after being pumped” (*American Citizen* (New York, NY), May 28, 1807).
- i) 1814 – One article in the corpora refers to a repeater air gun taken by Lewis and Clark on their expedition to the Pacific some eight years earlier, though the article itself has nothing to do with the expedition. Instead, this letter to the newspaper, criticizing a politician for repeating the same things that he has been saying for years, suggests as well that the Lewis and Clark repeater air gun was used not for hunting or warfare but rather to dazzle the Indians that the explorers encountered with their “great medicine,” thereby ensuring a peaceful encounter: “he [the politician in question], forthwith, becomes a “great medicine,” as the Shoshones called captain Lewis’ air gun”(*National Advocate*, Mar. 23, 1814). This article was written ten years after the start and eight years after the completion of the expedition. I did not find any contemporaneous articles or firsthand accounts in the corpora of such a gun or how it may have been used.
- j) 1819 – Finally, there is an ad for a French repeater air gun, for sale at 90 crowns: “which discharges 20 times before the air is expended” (*Salem Gazette* (Massachusetts), February 5, 1819).

64. To summarize: the corpus data shows that the terms “magazine gun,” “magazine wind gun,” and “magazine air gun” are extremely rare, occurring a mere three times in the corpora, along with nine instances of repeater air guns that do not include the word “magazine.” In contrast, there are approximately 1,200 references to the single-shot “air gun” in the several databases that I consulted. Subtracting an estimated 150 duplicates, that leaves about 1,050 references to a single-shot air gun. Two of the references, ¶ 65 (b) and (d) in the list above, suggest that they would be useful weapons for the military; one, ¶ 65 (a) above, recommends their use to hunters; and one writer, Desaguliers, in 1744 (above, ¶ 62), speculates that the weapon could be useful for self-defense. But for the most part, the references listed above to early repeater guns seem to be treated as curiosities: marvels of engineering constructed by clockmakers or other skilled artisans, items to be seen in a museum or exhibited at a tavern (*see* examples ¶ 65 (c) and (g) above). There is no lexical evidence that they were manufactured in quantity. Their mechanisms were complex, requiring a clockmaker’s skill to design, make, and repair. And it took time to recharge the air cylinder (one source in the list above, ¶ 65 (d), suggests sixteen minutes for one such repeater air gun, which would render them suboptimal in battle situations). A couple of entrepreneurs charged admission to view them (¶ 65 (c) and (g) above), and in one case, in ¶ 65 (c) above, patrons may pay six pence to try shooting the gun. The writer who cites the Lewis and Clark repeater gun ((¶ 65 (i))

suggests that the explorers used the gun to “impress” potentially hostile Native Americans rather than as a weapon against them. It too may have been a one-off. Furthermore, only three of the twelve references to repeater air guns refer to the bullet container as a “magazine,” a further indication that this usage of “magazine” is extremely rare before 1820 (*see* ¶¶ 57 and 60, above).

65. With advances in the design and manufacture of guns and ammunition, by the mid-nineteenth century, the term “magazine” starts to appear in the sense ‘ammunition container’ (gradually replacing the earlier terms “cartridge box” or “cartridge case”), not in air guns but in ones using gunpowder and bullets.

66. COFEA and COEME do not cover the period past 1800. COHA, which does have nineteenth century coverage, turns up only a handful of uses of “magazine” in collocation with bullets, guns, rifles, or weapons in the 1890s, and only three such uses cited above before 1820. Most COHA cites for “magazine” refer to print magazines; a smaller number from 1820–1880 refer to gunpowder storehouses.

67. Searching the word “magazine” in newspapers.com results in more than 3.3 million hits, the vast majority of them also referring to print journals. It is not currently possible to tease out the subset of these citations to determine exactly how many refer to weapons rather than print journals. I did try to estimate, indirectly, the frequency of the gun-specific use of “magazine” by running a Google n-gram search.

68. Google's n-gram viewer searches the corpus of digitized Google Books. It can give a rough approximation of a word's frequency in relation to the other words in the Google Books corpus. The results appear as a graph. The n-gram viewer is capable of showing the relative frequency of several words on the same graph. My n-gram search showed that between 1750–1880 the word “magazine” occurs with a frequency of 0.0005121511% in 1789 and a frequency of 0.0007324368 in 1880.² A search for “magazine gun” returns no hits for that same period. But a search for “magazine rifle” shows that it does not appear in the database before 1813; there are few instances from 1813 to 1820, with a frequency of 0.0000000185%; and then a sharp rise between 1863 and 1880, when the frequency reaches a high of 0.000000936%, reflecting both the increased use of the revolver and the invention of repeating rifles and machine guns during the Civil War.³ The Google n-gram data shows that the use of “magazine” in the Founding Era was not associated with guns. By 1880, the association with guns had become more common. Comparing the use of “magazine” in 1880 in all contexts with the use of “magazine rifle” that same year, it appears that the gun-related sense of “magazine” represents approximately 0.0012% of the occurrences of the word “magazine.” In other words,

²https://books.google.com/ngrams/graph?content=magazine&year_start=1750&year_end=1880&corpus=en-2019&smoothing=3).

³(https://books.google.com/ngrams/graph?content=magazine+rifle&year_start=1750&year_end=1880&corpus=en-2019&smoothing=3).

the association exists in the period surrounding the ratification of the Fourteenth Amendment, but it is still a rare term.

69. The n-gram estimate, together with the sparse evidence in COHA and the OED, all suggest that “magazine” in the sense “device for holding bullets” forms only a very small subset of the 3.3 million occurrences of “magazine” in the newspaper corpora. Although “magazine” in the gun-related sense shows a distinct rise between 1864 and 1880, it took another thirty to forty years for the “bullet holder” sense of the word “magazine” to become more common. Even then, text references to ammunition magazines often appear, not in general discourse, but in legislation passed early in the twentieth century restricting their size or use.

70. Most militia laws and regulations from the Founding Era specify minimum requirements for soldiers’ weapons, ammunition, and accoutrements. Most laws regulating weapons in the mid-nineteenth century restrict or ban specific kinds of weapons, often enumerating them, sometimes in terms we find colorful today but which were common at the time (Arkansas toothpicks, Bowie knives, slung shots, swords in canes, pistols capable of being concealed in a pocket). Occasionally, these laws further identified such weapons as those used by “brawlers,” thieves robbers, or others bent on illegal activities. Other weapons restrictions follow the English tradition of limiting possession of weapons by social class, nationality, or race.

71. I surveyed the gun regulations in the Duke Historical Database (firearmslaw.duke.edu) from the early medieval period through 1885 to see what terminology was used. Although militia laws do specify weapons and other required accoutrements or pieces of military equipment, including horses for the officers, those laws that prohibit certain kinds of weapons during the two critical periods (1789–1810; 1868–1880) do not single out *parts* of weapons. Here is one exception, from a 1776 Maryland statute: “Resolved, that no muskets or rifles, except by the owner thereof on his removal to reside out of this province, or any gun barrels, gun locks, or bayonets, be carried out of this province, without the leave of the council of safety for the time being.” [Proceedings of the Conventions of the Province of Maryland Held at the City of Annapolis, in 1774, 1775, & 1776, 147]

72. None of the laws that prohibit weapons, aside from the Maryland statute mentioned above, specifies a gun part or ammunition case or accoutrements of any kind. Although many present a list of banned or prohibited weapons—usually without defining them (the assumption is that the reader knows what they refer to), none of the laws mention cartridge boxes, bullets, barrels, or other parts of any weapons.

73. Later however, in the decades after the introduction of “magazines” as ‘carriers or holders of one or more bullets,’ laws and regulations against their nonmilitary use started to appear. A 1919 Maine law bans guns with loaded

magazines: “No person shall have a rifle or shotgun, either loaded or with a cartridge in the magazine thereof, in or on any motor vehicle while the same is upon any highway or in the fields or forests.” [1919 Me. Laws 193, Possession of loaded shotgun or rifle in motor vehicle on highways, fields or forests prohibited; penalty.]

74. Laws banning “machine guns” or firearms with “magazines” capable of firing multiple times without reloading appear in Vermont (1923 Vt. Acts and Resolves 127, An Act to Prohibit the Use of Machine Guns and Automatic Rifles in Hunting, § 10); Rhode Island (1927 R. I. Pub. Laws 256, An Act to Regulate the Possession of Firearms), and Massachusetts (1927 Mass. Acts 145, An Act Relative to Machine Guns and Other Firearms, ch. 326), among other states. In defining “machine gun,” Rhode Island’s law bans magazines which fire automatically or which hold more than twelve rounds: “‘machine gun’ shall include any weapon which shoots automatically and any weapon which shoots more than twelve shots semi-automatically without reloading.”

75. A 1933 Texas law bans “machine guns” capable of firing “more than five (5) shots or bullets.” [1933 Tex. Gen. Laws 219–20, 1st Called Sess., An Act Defining “Machine Gun” and “Person”; Making It an Offense to Possess or Use Machine Guns, ch. 82]

76. Finally, the Federal Firearms Act of 1934, which introduced a nationwide system of taxes, fees, and registration requirements for the transfer of

certain types of guns, specifies in great detail the nature of the “firearms” covered by the statute, including their barrel length and type of firing mechanisms: “(a) The term ‘firearm’ means a shotgun or rifle having a barrel of less than eighteen inches in length, or any other weapon, except a pistol or revolver, from which a shot is discharged by an explosive if such weapon is capable of being concealed on the person, or a machine gun, and includes a muffler or silencer for any firearm whether or not such firearm is included within the foregoing definition.”

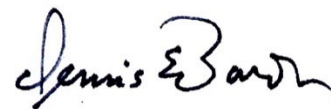
77. The Act also provides a specific definition of “machine gun”: “(b) The term ‘machine gun’ means any weapon which shoots, or is designed to shoot, automatically or semiautomatically, more than one shot, without manual reloading, by a single function of the trigger.” [48 Stat. 1236. 73rd Congress, 2nd Session, Ch. 757, HR 9741].

Conclusion

78. To repeat, there is virtually no lexical data that I have found showing that “arms” includes “accoutrements,” “cartridge boxes,” “cartouch boxes,” “magazines,” or any other parts of weapons. To the contrary, while “arms” is used as a general term for weapons (typically swords, knives, rifles, and pistols), it does not include ammunition, ammunition containers, flints, scabbards, holsters, armor, or shields, which are included in the category “accoutrements.” And there is no evidence from the small number of mentions of the repeater air guns in the databases

before the Civil War that such guns were used in the Founding Era by the American or British military, or that they were widely available in that period to civilians for hunting or self-defense.

I declare on this 13th day of February, 2023, that the foregoing is true and correct under penalty of perjury under the laws of the United States.

A handwritten signature in black ink, appearing to read "Dennis Baron", written over a horizontal line.

Dennis Baron